Hypotension

Clarity

$86\%$

$P(\downarrow BP)$
Acumen
Hypotension Probability Indicator
Know before it’s low.

The Acumen Hypotension Probability Indicator is a next-generation clinical decision support tool that enables you to gain insight into potential hypotensive events* before they impact your patients.
Recent research and hypotension probability.

Recent Research on the Effects of Intraoperative Hypotension
In a retrospective analysis performed at the Cleveland Clinic, the risk for acute kidney injury (AKI) and myocardial injury (MI) increased when mean arterial pressure (MAP) was less than 55 mmHg. Further, even short durations of intraoperative hypotension were associated with AKI and MI.¹

![Graph A](image)

**Predicted risk of (A) acute kidney injury and (B) myocardial injury for each minute the mean arterial pressure (MAP) is <55 mmHg, between 55 and 59 mmHg, between 60 and 64 mmHg, between 65 and 69 mmHg, and between 70 and 74 mmHg during noncardiac surgery. The risk for time in each blood pressure strata is adjusted for time in all other blood pressure strata.**¹

New Insight from Edwards Lifesciences
Now, with the new Hypotension Probability Indicator (HPI), you have the insight to detect and respond to potentially developing hypotension by recognizing trends and receiving alerts before incidents occur.

HPI is comprised of three elements:
- hypotension probability parameter P(↓BP)
- high-alert hypotension probability pop-up
- secondary screen of foundational and new hemodynamic parameters

![Graph B](image)

Hypotension Probability Parameter
The hypotension probability parameter, P(↓BP), indicates the possibility that a patient may be trending toward a hypotensive event.² The proprietary algorithm – developed using data from almost 13,000 past hypotensive events and over 12,000 non-hypotensive events² – coupled with machine learning techniques, detects potential hypotensive trending of a patient’s mean arterial pressure (MAP).² P(↓BP) is calculated every 20 seconds enabling you to visually track hypotension probability in real-time, before an event occurs.
Secondary Screen for Physiologic Clarity
The secondary screen is easily accessed through either the high alert pop-up window or from any EV1000 clinical platform monitoring screen. It visually links pressure and flow parameters which are arranged by preload, contractility, and afterload. This allows you to investigate potential hemodynamic factors as they relate to high hypotension probability.

High-Alert Hypotension Probability Pop-Up
Once $P(<\text{BP})$ exceeds 85%, an audible alarm sounds. When that probability exceeds the upper limit for two consecutive calculations, a pop-up window appears with a “high” alert – prompting you to investigate using the secondary screen’s advanced hemodynamic parameters.

The Next-Generation of Proactive Clinical Decision Support
Edwards brings past patient performance analytical techniques to the patient bedside, equipping you with the tools and clarity you need for real-time decision support and enabling you to proactively respond to developing hypotensive events before they occur.
The Edwards Advanced Hemodynamic Monitoring Portfolio

The Hypotension Probability Indicator is part of the Acumen decision support software suite. It is compatible with the IQ family of hemodynamic solutions – including the FloTrac IQ sensor, connected to a radial line – and EV1000 clinical platform.

Chosen by clinicians worldwide more than any other minimally-invasive hemodynamic monitoring solution, the FloTrac sensor is the reliable and practical solution for managing your moderate to high-risk patients. The FloTrac sensor connects to an existing arterial line and automatically calculates flow parameters every 20 seconds.

The EV1000 clinical platform was designed in collaboration with clinicians like you to present the physiologic status of the patient in an intuitive and meaningful way. It enables you to choose the hemodynamic parameters needed to monitor your patients and can be used with a variety of Edwards advanced hemodynamic monitoring solutions to meet your clinical approach and patient needs.

*A hypotensive event is defined as MAP < 65 mmHg for at least one minute in duration.

References

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Edwards Lifesciences devices placed on the European market meeting the essential requirements referred to in Article 3 of the Medical Device Directive 93/42/EEC bear the CE marking of conformity.

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Through ongoing collaboration with you, continuous education and our never-ending quest for advancement and innovation, Edwards develops solutions that provide the clarity to make proactive clinical decisions.